

Radio MiniDisc Player

Operating instructions



MZ-F40

Sony Corporation ©1997 Printed in Japan

Caution
The use of optical instruments with this product will increase eye hazard.

Information
IN NO EVENT SHALL SELLER BE LIABLE FOR ANY DIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE, OR LOSSES OR EXPENSES RESULTING FROM ANY DEFECTIVE PRODUCT OR THE USE OF ANY PRODUCT.

For customers in the United States

Information
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, used, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Owner's Record
The serial number and the model number are located at the bottom. Record the serial number in the space provided below. Refer to them whenever you call upon your Sony dealer regarding this product.
Model No. MZ-F40
Serial No. _____

"MD WALKMAN" is a trademark of Sony Corporation.

Welcome!

Welcome to the world of the MiniDisc! Here are some of the capabilities and features you'll discover with the new MiniDisc Player.

- Built-in FM/AM tuner — You can enjoy FM stereo/ AM. You can preset stations using the Auto Station Preset (ASP) function.
- Twin LCD display — LCD display for each MD and Radio for easier operations.
- The battery compartment can hold R6 (size AA) batteries or BP-DM20 rechargeable batteries. The rechargeable batteries can be charged by this unit.
- Remote controller-equipped headphones — You can operate the MD Player or Radio through the remote controller, leaving the player in your pocket or bag.

Playing an MD right away!

Prepare two R6 (size AA) alkaline Batteries. You can also use this player on house current or a rechargeable battery (see "Power sources").

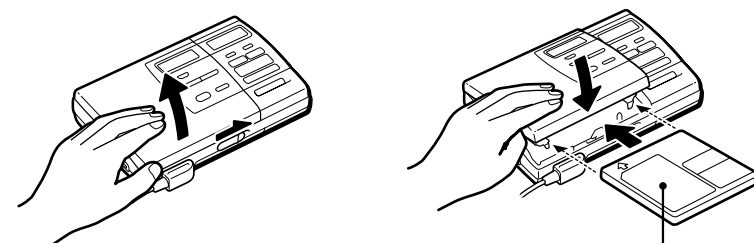
1 Install the batteries.



- 1 Open the lid.
- 2 Install two LR6 (size AA) alkaline batteries (not supplied), and close the lid.

The battery life is approx. 8 hours for MD playback. (This may be shorter due to operating conditions and the temperature of the location.)

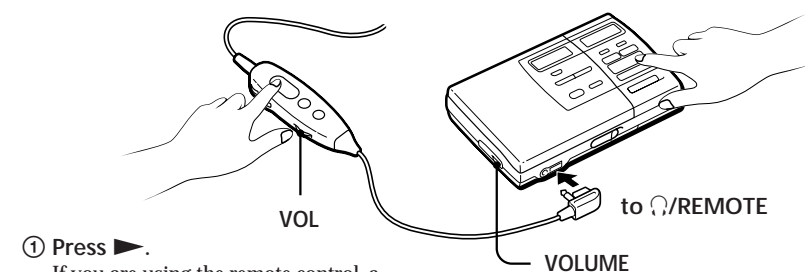
2 Insert an MD.



- 1 Slide OPEN and open the lid.
- 2 Insert an MD with the label side facing up, and press the lid down to close.

3 Play an MD.

Headphones with a remote control (supplied)



- 1 Press **▶**. If you are using the remote control, a short beep sounds in the headphones.
- 2 Turn VOLUME (VOL on the remote control) to adjust the volume.

If the playback does not start

- Make sure the MD Walkman is not locked. See *Locking the controls*.
- Is the radio turned on? Turn off the radio.

Note
Do not slide OPEN during playback. If you do, the lid will open and playback will stop.

MD display window while playing back

Track name²⁾ or elapsed time of the track being played



Track number

- 1) Once you open the lid, the point to start play will change to the beginning of the first track.
- 2) Appears only with MDs that have been electronically labeled.

To stop play, press **■**/CHARGE (■ on the remote control).

To	Press (Beeps in the headphones)
Find the beginning of the current track	◀◀ or ◀◀ side of ▶▶ on the remote control once (Three short beeps).
Find the beginning of the next track	▶▶ or ▶▶ side of ▶▶ on the remote control once (Two short beeps).
Go backwards while playing	keep pressing ◀◀ or ◀◀ side of ▶▶ on the remote control.
Go forward while playing	keep pressing ▶▶ or ▶▶ side of ▶▶ on the remote control.
Remove the MD	■/CHARGE and open the lid. ¹⁾

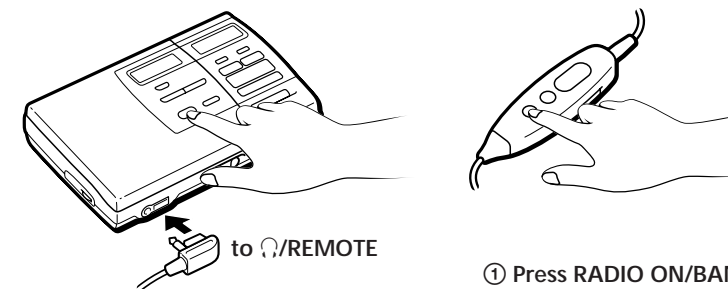
Listening to the radio!

The unit automatically scans and tunes in to stations that are receivable in your present location. Therefore you should operate where you can get good reception.

1 Install the batteries.

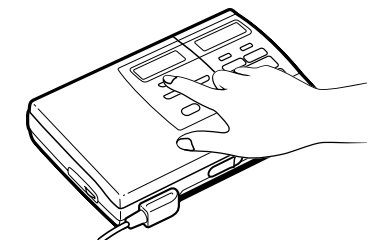
The battery life is approx. 30 hours for Radio (This may be shorter due to operating conditions and the temperature of the location.)

2 Turn on the Radio.



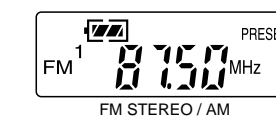
- 1 Press RADIO ON/BAND.

3 Scanning the radio stations.

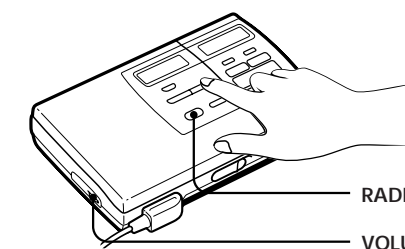


- 1 Press and hold ASP until "AREA" flashes in the radio display.

Then the FM frequency and "PRESET 1" will appear in the radio display of the MD Walkman.



4 Tuning in to a station.



- 1 Press RADIO ON/BAND to select AM, FM1¹⁾ or FM2¹⁾.
- 2 Press PRESET +/- to select the preset number.
- 3 Adjust the VOLUME.

To turn off the radio, press RADIO OFF (■ on the remote control).

If the radio does not play

- Make sure the MD Walkman is not locked. See *Locking the controls*.
- Is the MD playing? Turn off the MD.

Notes

- Do not remove the power sources while scanning stations, or the received stations may not be stored.
- If you cannot receive the stations well, tune in manually and store the stations.

Tip
Next time you listen to the radio in the same area, you can skip step 3.

To improve the radio reception
FM: Extend the headphones cord for better reception.
AM: Rotate the unit horizontally for optimum reception.

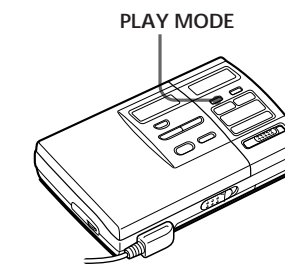
When you are listening to a stereo broadcast
Set the FM switch (located at the top surface of the MD Walkman) to STEREO. If the reception is poor or noisy, set the FM switch to MONO. When the FM switch is set to MONO the sound will become monaural.

¹⁾ Up to 16 stations can be preset, FM1 and FM2 combined.

▶ Various ways of playback

Playing tracks repeatedly

You can play tracks repeatedly in three ways: all repeat, single repeat, and shuffle repeat.



Press PLAY MODE while the player is playing an MD. Each time you press PLAY MODE, the play mode indication changes as follows.

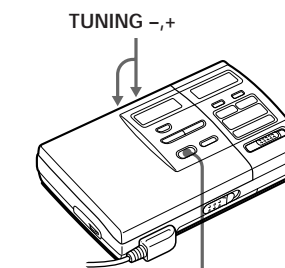


- (none) (normal play)
All the tracks are played once.
- 1 (all repeat)
All the tracks are played repeatedly.
- 1 (single repeat)
A single track is played repeatedly.
- SHUF (shuffle repeat)
All the tracks are played repeatedly in random order.

▶ Various ways of radio reception

Tuning in to stations manually (Manual tuning)

If you do not know the frequency of a station you may scan by moving the frequency step by step.



RADIO ON/BAND

- 1 Press RADIO ON/BAND to turn on the radio. Then press RADIO ON/BAND to select AM, FM1* or FM2*.

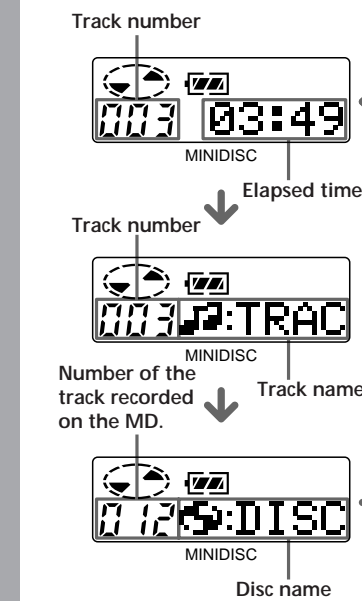
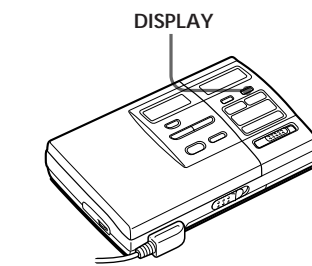
- 2 Press TUNING +/- to tune in a desired station.

If you press and hold TUNING +/- for more than a few seconds, the MD Walkman will start tuning the stations automatically.

*Operation is the same for FM1 and FM2.

To know the track name and time

Press DISPLAY while the player is playing an MD. Each time you press DISPLAY, the display changes as follows.



Note
Disc and track names appear only with MDs that have been electronically labeled.

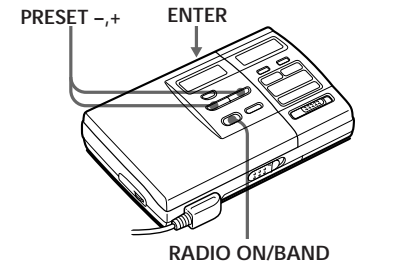
Presetting Stations

What the ASP button does (ASP function)

When you press the ASP button, the MD Walkman searches and stores receivable stations automatically. If the ASP function does not store the desired station, or you want to customize the preset number of the stations, see *Tuning in to stations manually* or *Storing radio stations manually*.

Automatic scanning and memorization of a selected band (Auto Memory Scan)

The MD Walkman searches and memorizes receivable stations automatically. You can preset 8 stations for AM, 16 for FM (FM 1 and FM2 combined). Operate this function where the radio reception is well.



- 1 Press RADIO ON/BAND to turn on the radio and then press RADIO ON/BAND to select AM, FM1* or FM2*.

- 2 Press ENTER until "A" appears in the display.



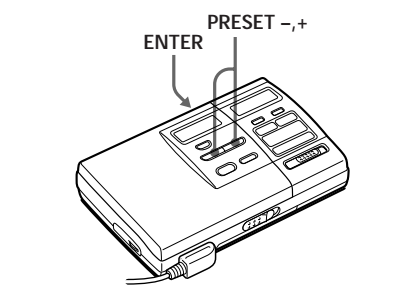
The MD Walkman starts searching and storing stations automatically.

- 3 Press PRESET +/- to select the preset number you wish to listen.

If the reception is poor, you may be able to preset less than 8 stations (for AM)/16 stations (for FM).

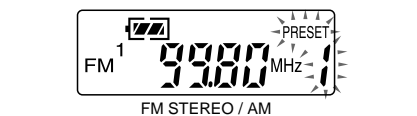
* The unit will first store stations in FM1 regardless of your choice of FM1 or FM2.

Storing stations manually (Manual-Memory function)



- 1 Turn on the radio and tune in to a desired station. For FM, choose either FM1 or FM2.

- 2 Press ENTER.



- 3 While "PRESET" and the preset number are flashing, select a preset number on which you wish to store the station using PRESET +/-.

- 4 While "PRESET" and the preset number are flashing, press ENTER.



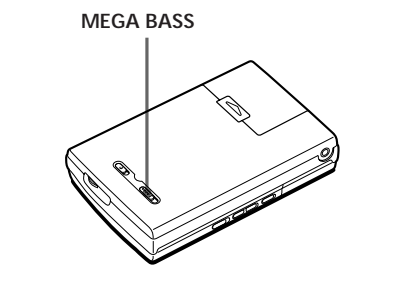
- 5 Tune in to a station using PRESET +/-.

To cancel the stored station Operate the unit according to the steps above. At step 3 press PRESET +/- repeatedly until "-" is displayed. Then press ENTER while "-" is flashing.

▶Other useful functions

Emphasizing bass (MEGA BASS)

The MEGA BASS function intensifies low frequency sound for richer quality audio reproduction.

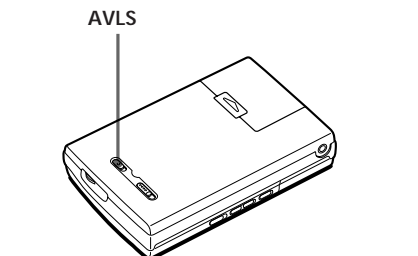


Slide MEGA BASS. Choose 1 (slight effect) or 2 (strong effect). To cancel the effect, set MEGA BASS to 0.

Note
If the sound is distorted when emphasizing bass, turn down the volume.

Protecting your hearing (AVLS)

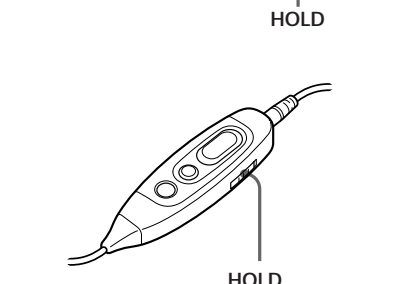
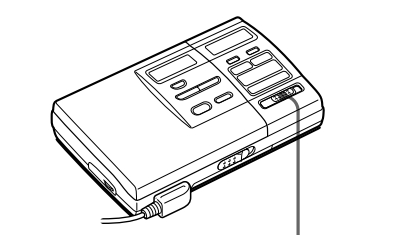
The AVLS (Automatic Volume Limiter System) function keeps down the maximum volume to protect your ears.



Set AVLS to LIMIT. The volume is kept at a moderate level, even if you try to turn the volume above the limited level.

Locking the controls (HOLD)

To prevent the buttons from being accidentally operated when you carry the player, use this function.



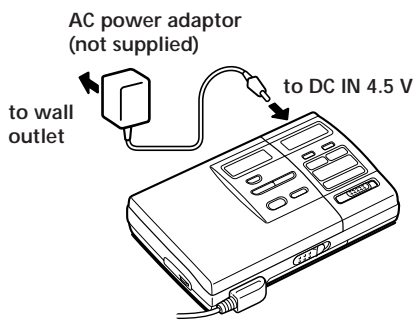
Slide HOLD in the direction of the →.

▶Power sources

Aside from alkaline dry batteries, you can use the player on house current or a nickel metal hydride rechargeable battery.

Using on house current

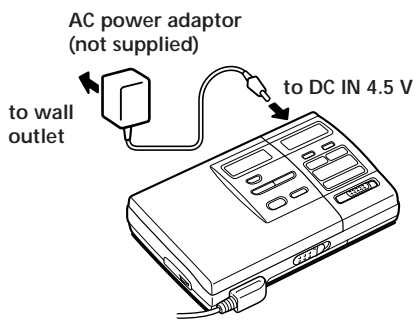
To use your player on house current, connect the AC power adaptor AC-E45HG (not supplied).



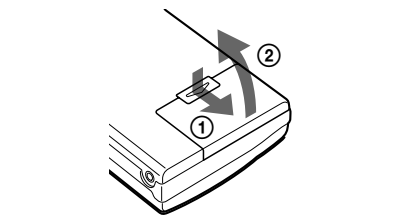
Using on a nickel metal hydride rechargeable battery

Before using the rechargeable battery BP-DM20 (not supplied) for the first time, charge it with the AC power adaptor AC-E45HG (not supplied).

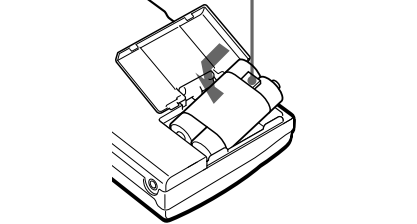
- 1 Connect the AC power adaptor.



- 2 Insert the rechargeable battery, and close the lid.



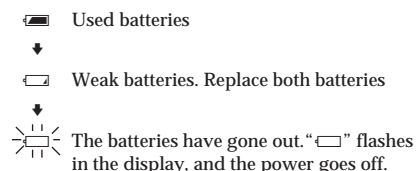
The projection on the battery comes on the right.



- 3 Press ■/CHARGE on the player. "Charge" flashes and the battery indication appears in the display and charging starts. When charging is completed, "Charge" and the battery indication go out. A completely discharged battery takes about 3 hours to charge fully. To stop charging before the battery is fully charged, press ■/CHARGE.

- 4 Disconnect the AC power adaptor. As long as the player is connected to the AC power, the power will be supplied from the AC source instead of the battery.

When to replace or charge the batteries
You can check the battery condition with the battery indication displayed while using the player.



Note
If you turn the radio on with weak batteries, "□" may appear on the MD display. This is not a malfunction.

Battery life*

Batteries	MD Playback	Radio
BP-DM20 nickel metal hydride rechargeable battery	Approx. 6 hours	Approx. 16 hours
R6 (size AA) Sony alkaline dry batteries LR6(SG) x 2	Approx. 8 hours	Approx. 30 hours

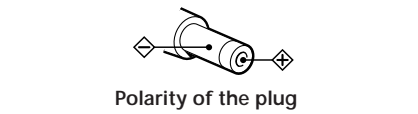
* The battery life may be shorter due to operating conditions and the temperature of the location.

▶Additional information

Precautions

- On safety**
 - Do not put any foreign objects in the DC IN 4.5 V jack.

- On power sources**
 - Use the house current, two size AA (R6) batteries, nickel metal hydride rechargeable battery, or car battery.
 - For use in your house: Use the AC power adaptor AC-E45HG (not supplied). Do not use any other AC power adaptor since it may cause the player to malfunction.



- The player is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the player itself has been turned off.
- If you are not going to use this player for a long time, be sure to disconnect the power supply (AC power adaptor, dry batteries, rechargeable battery, or car battery cord). To remove the AC power adaptor from the wall outlet, grasp the adaptor plug itself; never pull the cord.
- For use in the car: Use the CPA-9 car connecting pack and the DCC-E245 car battery cord (not supplied).

- On dry batteries**
Incorrect battery usage may lead to leakage of battery fluid or bursting batteries. To prevent such accidents, observe the following precautions:
 - Install the + and - poles of the batteries correctly.
 - Do not install new and used batteries or different kinds of batteries together.
 - Do not try to recharge dry batteries.
 - When the player is not to be used for a long time, be sure to remove the batteries.
 - If a battery leak should develop, carefully and thoroughly wipe away battery fluid from the battery compartment before inserting new ones.

- On nickel metal hydride rechargeable battery**
 - Be sure to use the recommended AC power adaptor when charging the rechargeable battery.
 - Charging time may vary depending on the battery condition.
 - When you are using the battery for the first time or after a long period of disuse, the battery life may be shorter. In this case, charge and discharge the battery several times. The battery life will be restored.
 - If the rechargeable battery capacity becomes half the normal life, replace it with a new one.

- On heat build-up**
 - Heat may build up in the player if it is used for an extended period of time. In this case, leave the player to cool down.

- On installation**
 - Never use the player where it will be subjected to extremes of light, temperature, moisture or vibration.
 - Never wrap the player in anything when it is being used with the AC power adaptor. Heat build-up in the player may cause malfunction or injury.

- On the headphones**
Road safety
Do not use headphones while driving, cycling, or operating any motorized vehicle. It may create a traffic hazard and is illegal in many areas. It can also be potentially dangerous to play your player at high volume while walking, especially at pedestrian crossings. You should exercise extreme caution or discontinue use in potentially hazardous situations.

Preventing hearing damage
Avoid using headphones at high volume. Hearing experts advise against continuous, loud and extended play. If you experience a ringing in your ears, reduce the volume or discontinue use.

Caring for others
Keep the volume at a moderate level. This will allow you to hear outside sounds and to be considerate of the people around you.

- On the MiniDisc cartridge**
 - Do not break open the shutter.
 - Do not place the cartridge where it will be subject to light, temperature, moisture or dust.

- On cleaning**
 - Clean the player casing with a soft cloth slightly moistened with water or a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzene as it may mar the finish of the casing.
 - Wipe the disc cartridge with a dry cloth to remove dirt.
 - Dust on the lens may prevent the unit from operating properly. Be sure to close the disc compartment lid after inserting and ejecting an MD.

Note on mechanical noise
The player gives out mechanical noise while operating, which is caused by the power-saving system of the player and it is not a trouble.

For the customers in the U.S.A. and Canada

DISPOSAL OF NICKEL METAL HYDRIDE BATTERY.
NICKEL METAL HYDRIDE BATTERY. DISPOSE OF PROPERLY.
You can return your unwanted nickel metal hydride batteries to your nearest Sony Service Center or Factory Service Center.
Note: In some areas the disposal of nickel metal hydride batteries in household or business trash may be prohibited. For the Sony Service Center nearest you call 1-800-222-SONY (United States only) For the Sony Factory Service Center nearest you call 416-499-SONY (Canada only)
Caution: Do not handle damaged or leaking nickel metal hydride battery.

If you have any questions or problems concerning your MD Walkman, please consult your nearest Sony dealer.

Troubleshooting

Should any problem persist after you have made these checks, consult your nearest Sony dealer.

The player does not work or works poorly.

- You tried to play with no disc in the player ("NO DISC" flashes).
 - ➔ Insert an MD.
- The player is locked ("HOLD" flashes).
 - ➔ Slide HOLD against the arrow to unlock the player.
- Moisture has condensed inside the player.
 - ➔ Take the MD out and leave the player in a warm place for several hours until the moisture evaporates.
- The rechargeable battery or dry batteries are weak ("□" flashes).
 - ➔ Replace the dry batteries or recharge the battery.
- The dry batteries have been installed incorrectly.
 - ➔ Install the batteries correctly.
- An MD with no recording on it is inserted ("BLANK" flashes).
 - ➔ Insert a recorded MD.
- The player cannot read the disc (it's scratched or dirty) ("ERROR" flashes).
 - ➔ Reinsert or replace the disc.
- You pressed a button while the disc indication was rotating quickly.
 - ➔ Wait until the indication rotates slowly.
- The AC power adaptor was unplugged during playing or a power outage occurred.
- While operating, the player received a mechanical shock, too much static, abnormal power voltage caused by lightning, etc.
 - ➔ Restart the operation as follows.
 - 1 Disconnect all the power sources.
 - 2 Leave the player for about 30 seconds.
 - 3 Connect the power source.

- The MD is not played normally.**
 - The player is set to the repeat mode ("↻" is displayed).
 - ➔ Press PLAY MODE repeatedly until "↻" disappears, then start playing.

- An MD is not played from the first track.**
 - Disc playing stopped before it came to the last track.
 - ➔ Press ◀▶ repeatedly or open and close the lid once to go back to the beginning of the disc, and restart playing after checking the track number in the display.

- Playback sound skips.**
 - The player is placed where it receives continuous vibration.
 - ➔ Put the player on a stable place. A very short track may cause sound to skip.

- Sound has a lot of static.**
 - Strong magnetism from a television or such device is interfering with operation.
 - ➔ Move away from the source of strong magnetism.

- Charging the rechargeable battery does not start.**
 - The rechargeable battery has been inserted incorrectly or the AC power adaptor has been connected incorrectly.
 - ➔ Insert the battery correctly or connect the AC power adaptor correctly.

- No sound comes through the headphones.**
 - The headphones plug is not firmly connected.
 - ➔ Connect the headphones plug firmly to ◯/REMOTE jack.
 - Volume is too low.
 - ➔ Adjust the volume by turning VOLUME control.
 - AVLS is on.
 - ➔ Slide AVLS to NORM.
- Cannot recall the desired station by pushing the ASP button.**
 - Poor receiving conditions at present location (reception is weak, or there is a broadcast station nearby, etc.).
 - ➔ Tune in and store stations manually.

Specifications

MD Section
Audio playing system
MiniDisc digital audio system
Laser diode properties
Material: GaAlAs
Wavelength: λ = 780 nm
Emission duration: continuous
Laser output: less than 44.6 μW*
*This output is the value measured at a distance of 200 mm from the objective lens surface on the optical pick-up block with 7mm aperture.
Revolutions
400 rpm to 900 rpm (CLV)
Error correction
Advanced Cross Interleave Reed Solomon Code (ACIRC)
Sampling frequency
44.1 kHz
Coding
Adaptive TTransform Acoustic Coding (ATRAC)
Modulation system
EFM (Eight to Fourteen Modulation)
Number of channels
2 stereo channels
1 monaural channel
Frequency response
20 to 20,000 Hz ± 3 dB
Wow and Flutter
Below measurable limit
Outputs
Headphones: stereo mini-jack, maximum output level 15 mW + 15 mW, load impedance 16 ohm

Radio section
Frequency range
Model for North and South America:
FM:87.5 - 108MHz
AM:530 - 1710kHz
Model for other countries:
FM:87.5 - 108MHz
AM:531 - 1602kHz

General
Power requirements
Sony AC Power Adaptor AC-E45HG (not supplied) connected to the DC IN 4.5 V jack:
220-230V AC, 50/60 Hz (European model), 120V AC, 60Hz (USA and Canadian model), 100-240V AC, 50/60Hz (Other models)
Two LR6 (size AA) batteries (not supplied)
Nickel metal hydride rechargeable battery BP-DM20 (not supplied)
Dimensions
Approx. 123 × 27.5 × 79.6 mm (w/h/d) (5 × 1 1/8 × 3 1/4 in.)
Mass
Approx. 200 g (7.0 oz) the player only
Approx. 300 g (10.6 oz) incl. a premastered MD, headphones, and two Sony alkaline LR6 (SG) batteries
Supplied accessories
Headphones with a remote control (1)
Carrying case (1)
Ear pads (2)

Optional accessories
AC-E45HG AC power adaptor
BP-DM20 Nickel Metal Hydride Rechargeable battery
DCC-E245 Car battery cord
CPA-9 Car Connecting Pack
MDR-D33, MDR-D55, MDR-D77 Stereo Headphones
SRS-A41 Sony Active Speakers
CK-MD4 MiniDisc Carrying Case
CK-MD10 MiniDisc Filing Box

Your dealer may not handle some of the above listed accessories. Please ask the dealer for detailed information about the accessories in your country.

US and foreign patents licensed from Dolby Laboratories Licensing Corporation.

Design and specifications are subject to change without notice.